



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/565,798

01/25/2006

Buddie Gordon Miller

052895

9646

38834

7590

08/28/2008

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP
1250 CONNECTICUT AVENUE, NW
SUITE 700
WASHINGTON, DC 20036

EXAMINER

VENNE, DANIEL V

ART UNIT

PAPER NUMBER

3617

MAIL DATE

DELIVERY MODE

08/28/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/565,798	Applicant(s) MILLER, BUDDIE GORDON	
	Examiner DANIEL V. VENNE	Art Unit 3617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,3 and 5-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,3,5-23 is/are rejected.
- 7) ☒ Claim(s) 8 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. An amendment was received from applicant on 7/3/2008.
2. Claims 1 and 4 are canceled.
3. Claims 2, 5-8, 10, 11, 13-15, 17-20 and 22 are amended.

Claim Objections

4. Claims 8 and 19 are objected to because of the following informalities: On line 6, "lot" should be replaced with -- slot --. It appears from claim 19, that applicant intended one slot and a second slot; however, the second slot is extending both transversely and longitudinally through the boat hull, which appears incorrect, and that one slot is intended to extend in the transverse direction and the other slot is intended to extend in a longitudinal direction. Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 2, 3, 5, 6, 11-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Fletcher (US 3929644). Fletcher discloses a boat comprising a unit body having at least one elongated, substantially vertical slot [19] extending substantially therethrough

Art Unit: 3617

such that the slot divides the boat hull into at least two substantially separate buoyant compartments. In as much as the slot is more open at the bow than the stern (Fig. 2), the slot can be considered open at the bow and partly closed at the stern of the boat. There are openings [57] that can be considered slots extending partly transversely through the hull. Applicant has not indicated that the slot extends transversely all the way through the hull. The hull can be considered a catamaran. Since Webster's II Dictionary Third Edition (c) 2005 defines as one definition for **submarine** – *being undersea or beneath the surface of the sea or undersea*, the hull portion beneath the surface of the water can be considered a submarine hull. Applicant has not explicitly defined submarine hull in the specification as a hull of a ship or a vehicle that operates solely submerged or beneath the surface of the sea; applicant indicates in paragraph [0022] of the Disclosure of the Invention (US 2008/0053355 A1) and that a submarine vessel can include a vessel which can operate either fully or partially submerged.

7. Claims 2, 3, 5-7, 11-16 and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Norek (US 6647909 B1). Norek discloses a boat comprising a unit body having at least one elongated, substantially vertical slot (diffuser) extending substantially therethrough such that the slot divides the boat hull into at least two substantially separate buoyant compartments (the port and starboard sides of the diffuser enclosure can be considered the two substantially separate buoyant compartments. The slot is open on a bottom forward bow portion of the hull and closed on the majority of the bottom of the hull. The slot can be considered to extend transversely at least partly through the hull. Applicant has not indicated that the slot

Art Unit: 3617

extends transversely all the way through the hull. Rudders [60, 62] can be considered to partially close the slot at the stern. The hull can be considered a catamaran or a submarine. Applicant indicates in paragraph [0022] of the Disclosure of the Invention (US 2008/0053355 A1) and that a submarine vessel can include a vessel which can operate either fully or partially submerged.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 2, 3, 6-12, 15, 16, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klose (US 3291088). Klose discloses a boat with a hull [50] having at least one elongated vertical slot (trunk) [64] along the boat centerline and extending substantially through the hull. Water can freely communicate with the slot when the removable daggerboard [76] is not fitted in place within the slot. The slot extends longitudinally through the boat hull, although not through the entire hull length. The slot is open at a top and bottom and can be considered open at a bottom forward end and bottom rear end and can be considered closed at a front vertical portion and at a bottom vertical portion. The opening at the hull bottom and deck can be considered an air vent. The slot can be considered intermittently open as much as the water level can intermittently change to affect the air and water volume and opening in the slot. The slot extends transversely at least partly through the boat hull. Applicant has not

Art Unit: 3617

specified the degree of transverse extension through the boat hull in claim 15.

Applicant has not specified a degree of openness or closure for the slot nor clearly defined a front, rear, bottom or top of the slot. The slot can be considered angled as much as any object can be considered angled (sloped, inclined or slanted) by any angle equal to or between 0 and 360 degrees. In as much as the center buoyancy is the centroid of the underwater portion of a vessel or center of the underwater volume (Principles of Naval Architecture, Vol. I Stability and Strength, pp. 16-17, (c) 1988 SNAME), only one center of buoyancy is provided for any single immersed object; unless a slot completely separates a submerged object into more than one separate objects, only one center of buoyancy can exist for the object. However, if one considers that the center of buoyancy is the sum of all centers of buoyancy for each portion of a submerged hull, then it can be considered that Klose would inherently have a center of buoyancy for each symmetric port and starboard half of the hull on each side of the slot with a net center of buoyancy (or net centroid of underwater volume) being between the individual fractional centers of buoyancy for the two symmetric port and starboard halves. In as much as Webster's II Dictionary Third Edition (c) 2005 defines as one definition for **submarine** – *being undersea or beneath the surface of the sea or undersea*, the hull portion of Klose beneath the surface of the water can be considered a submarine hull. Applicant has not explicitly defined submarine hull in the specification as a hull of a ship or a vehicle that operates solely submerged or beneath the surface of the sea; applicant indicates in paragraph [0022] of the Disclosure of the Invention (US 2008/0053355 A1) and that a submarine vessel can include a vessel which can operate

Art Unit: 3617

either fully or partially submerged. Klose does not disclose that the slot divides the boat hull into at least two substantially buoyant compartments or extends approximately the length of the boat hull; however, it would have been obvious to one of ordinary skill in the art to adjust the length of the slot as a matter of design choice depending on the length of daggerboard desired for the boat. A sufficiently long slot for such a daggerboard would be considered to divide the boat into two substantially buoyant compartments or extend approximately the length of the boat hull and would also be closed at the bow and at the stern. The rationale would have been to adjust the length of the slot depending on the length of the daggerboard desired to achieve the stability and performance characteristics desired for the boat hull.

10. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klose (US 3291088). Klose discloses all claimed features as indicated above with the exception of a plurality or three elongated slots extending longitudinally as claimed. It would have been obvious to one of ordinary skill in the art to include more than one slot and up to three slots of the recited configuration with Klose to create the invention as claimed by applicant, in order to provide for multiple removable daggerboards to improve upon the lateral and dynamic stability of the boat.

11. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fletcher (US 3929644), in view of Thiger et al. (US 6250240 B1). Fletcher discloses all claimed features as indicated above with the exception of the boat hull being a trimaran. Thiger et al. in Fig. 8 shows a trimaran which has three hulls. It would have been obvious to one of ordinary skill in the art to try a trimaran hull instead of a catamaran hull with

Art Unit: 3617

Fletcher in order to provide an additional slot [19] for scavenging oil that would increase the scavenging capability for the boat.

12. Claims 19-22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fletcher (US 3929644), in view of Thiger et al. (US 6250240 B1). Fletcher discloses all claimed features as indicated above with the exception of the hull including three elongated slots. Thiger et al. in Fig. 7 shows a quadramaran which has four hulls. It would have been obvious to one of ordinary skill in the art to try a quadramaran hull instead of a catamaran hull with Fletcher in order to provide two additional slots [19] for scavenging oil that would increase the scavenging capability for the boat.

Response to Arguments

13. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

Art Unit: 3617

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

The prior art cited and not relied upon is considered pertinent to applicant's disclosure. Alexander et al. (US 3076426) discloses a slot [28]. Kort (US 1759511) shows a slot (tunnel) [t1, t2]. Robinson et al. (US 6526903) discloses slots (channels). Hubley (US 6250246 B1) discloses slots [36]. Tam (US 5438947) shows a slot (tunnel) [18] in a submarine vehicle. Norek (US 6966271 B2) discloses a slot (tunnel).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel V. Venne whose telephone number is (571) 272-7947. The examiner can normally be reached between 7:30AM - 4:00PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samuel J. Morano can be reached on (571) 272-6684. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit: 3617

If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (In USA or CANADA) or 571-272-1000.

DVV

/Lars A Olson/
Primary Examiner, Art Unit 3617